

The US EPA ASPECT system (ASPECT) collects airborne infrared (IR) images and chemical screening data from a safe distance over sites. ASPECT is an emergency response aircraft permitting remote chemical detection in support of the first responder. The system consists of an airborne high speed Fourier transform infrared spectrometer (FTIR) coupled with a wide-area IR line scanner.

ASPECT flew 28 flights covering 134 Risk Management Plan (RMP) facilities, 456 drinking water plants and 105 waste water plants in support of the Hurricane Harvey response. This report cover flights dated from 9/4 to 9/11. The screening level results from ASPECT were compared to the ASPECT list of Texas Commission on Environmental Quality (TCEQ) short-term Air Monitoring Comparison Values (AMCVs) and found no exceedances of the short-term AMCVs for compounds shown in Table 1. Each flight and its area targets are listed in Table 2.

Table 1.

Chemical Compounds	Short-term AMCV (ppm)	ASPECT Detection Limit (ppm)*
1,1-dichloroethane	1.0	0.8
1-butene	27	12
acetone	11	5.6
dichlorodifluoromethane	10	0.7
ethyl acetate	4	0.8
ethylene	500	5
isobutane	33	15
methyl ethyl ketone	20	7.5
methylene chloride	3.4	1.1
n-butyl acetate	7.4	3.8
n-propyl acetate	2	0.7
propylene	Simple Asphyxiant	3.7
vinyl chloride	27	0.6

* The concentration limits are derived using a 10 meter plume path length.

Table 2.

Date	Flight #	Primary Area	Detections Above AMCV*
9/4	14	Anahuac, Wallisville, Hankamer and Winnie TX	No Detections above AMCV
9/4	15	Point Comfort, and Bay City, TX	No Detections above AMCV
9/5	16	-	
9/5	17	El Campo, Wharton, Lane City, East Bernard, West Columbia, and Sweeny, TX	No Detections above AMCV
9/6	18	Kay, and Cypress, TX	No Detections above AMCV
9/6	19	Angleton, and Lake Jackson, TX	No Detections above AMCV
9/7	20	Houston, TX	No Detections above AMCV
9/7	21	Freeport, and Brazoria, TX	No Detections above AMCV
9/8	22	Beaumont, Nederland, Port Arthur, and Orange, TX	No Detections above AMCV
9/8	23	Houston, Deer Park, Baytown, Mont Belvieu, and Texas City, TX	No Detections above AMCV
9/9	24	Danbury, Liverpool, Galveston, and Texas City, TX	No Detections above AMCV
9/9	25	Alvin, Santa Fe, La Marque, Dickinson, and League City, TX	No Detections above AMCV
9/10	26	Alvin, Iowa Colony, Sienna Plantation and Arcola, TX	No Detections above AMCV
9/11	27	La Porte, Pearland, Almeda, and Houston, TX	No Detections above AMCV
9/11	28	Needville, Rosharon, Arcola, Iowa Colony, and Sienna Plantation, TX	No Detections above AMCV